Chapter 1

Introduction

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1.1 PURPOSE AND OBJECTIVES

The purpose of the Montana Stockwater Pipeline Manual is to provide Soil Conservation Service (SCS) personnel and others, where appropriate, with detailed technical information and procedures which may be used for planning, design and management of stockwater pipelines in Montana.

Stockwater pipelines are installed to (1) provide improvement in the beneficial use of rangeland by providing better distribution of livestock, (2) prevent loss of water by evaporation and seepage, (3) maintain and improve the plant community, and (4) prevent erosion resulting from overgrazing near water sources.

This manual is only a guide; it does not set SCS policy or standards. Policy and standards are set by SCS documents such as the National Planning Manual, the National Engineering Manual, and the practice standards as contained in Section 4 of the Field Office Technical Guide FOTG.

FOTG standards and specifications must be used in conjunction with conservation practices and procedures covered by this manual. Best available procedures and data should always be used, whether or not they are in this manual.

1.2 GENERAL

Stockwater pipelines come in many configurations and sizes in Montana. They may consist of anything from a short piece of pipe between a spring and stock tank, to many miles long pipelines with pressures at the low point as high as 500 psi. Design may be as critical for a short pipeline as for a long one.

Consider what can happen if a pipeline fails. If there is little or no backup water available in a field, and the problem is not discovered promptly, livestock will die. During hot, dry, weather a cow can only last three or four days without water.

A stockwater pipeline can be a great improvement over previously used watering systems. Stockwater ponds tend to dry up at the worst times, windmills often don't work when they are needed and hauling water is an unpopular, losing proposition. On the other hand a stockwater pipeline can be made to be a very dependable water distribution system. Not only can it be dependable, but good quality water can be delivered to optimum locations to promote good grazing distribution and healthy animals.

Planning and design of a stockwater pipeline may be complex and pipelines can be a significant investment. It is very important that they be correctly planned and designed and be as economical as possible. This manual is dedicated to providing some of the information and tools needed to get this job done.